

iPA SERIES

Battery Portable Passive Intermodulation Analyzer



iPA Passive Intermodulation (PIM) Analyzer

The iPA Series Passive Intermodulation (PIM) analyzer is the first battery powered PIM Test Analyzer versatile enough to support multiple test scenarios such as testing at the top of the tower, base of tower, roof top and in-building for DAS systems. This IEC compliant 20W, rugged, battery operated design includes a tablet in a ruggedized case for remote control, hands-free dynamic testing scenario that is safe and convenient. Add the optional Range to Fault (RTF) module to quickly identify the location of PIM and Return Loss sources.

Evolved from a design legacy of field proven analyzers this PIM Analyzer enables network operators to improve site performance by finding and eliminating sources of passive intermodulation at the cell site. An intuitive touch screen interface is also available for local control, performing tests and quickly generating site reports.



PRODUCT FEATURES

- Rugged and reliable; designed with tower climbers in mind
- Fully configurable frequencies, powers and IM products
- 7 inch tablet included for remote control of device
- Simple to operate touch screen interface
- Extensive reporting capabilities
- Spectrum monitor, frequency sweep and time trace modes

TECHNICAL SPECIFICATIONS |

SYSTEM

Measurement method	Reverse (reflected) PIM, 3rd and 5th order
Residual PIM	< -117dBm/-160dBc max (<-125dBm/-168dBc typ) (x2 @ 43dBm)
Interface ports	1x RF output (7-16 DIN female), 1x USB 2.0 Host, 1x USB 2.0 Slave, 1x SD, 1x monitor port (SMB female), 1x SMA-RP (Wi-Fi external antenna)
User interface	Local - touch screen display 4.3in (109mm) Remote - 7 inch tablet (included), any user device Wi-Fi and Web browser
Return loss alarm	Automatic detection and shut down when high RL is detected

TRANSMITTER

Transmit frequencies	See model table
Frequency increment	100kHz
Frequency accuracy	± 5ppm (max), aging ± 1ppm (max) after first year
Power per tone (adjustable)	+0.1 to 20W (+20 to +43dBm in 1dBm increments)
Power accuracy (per tone)	± 0.5dB (max)

TECHNICAL SPECIFICATIONS CONTINUED |

RECEIVER

Receive band (100kHz steps)	See model table
Measurement noise floor	< -128dBm
Measurement range	-50dBm to -128dBm

ELECTRICAL

Battery power	25.9 VDC, 2500 mAH Li-ion battery packs (removable)
Battery operating time	Depends on usage, 2 hr min. per battery pack
Battery charger	Output: 29.4 VDC, 1.2 Amp

MECHANICAL

Dimensions	14.5 x 9.4 x 6.3in (369 x 240 x 160mm)
Weight	< 26lbs (12kg)
Cooling	Natural convection

ENVIRONMENTAL

Operating temperature range	-10°C to +45°C (+14°F to +113°F)
Storage temperature range	-10°C to +60°C (+14°F to +140°F)
Ingress protection (IP)	IP54. IP67 when enclosed in optional hard case
Relative humidity	5% to 95% RH non-condensing
Mechanical shock	40G shock rating

MODELS |

	DESCRIPTION	TX1 RANGE	TX2 RANGE	RX RANGE (PIM)	RTF MODULE #
iPA-0707A	700MHz LOW/HIGH	728-731.5MHz	741-764MHz	698-716MHz; 776-802MHz	RTF-1000A
iPA-0850A	850MHz	869-873MHz	885-894MHz	837-849MHz	RTF-1000A
iPA-0900A	EGSM900	932.5-937.5MHz	948.5-960MHz	903-915MHz	RTF-1000A
iPA-1800A	DCS1800	1805-1817.5MHz	1855-1880MHz	1730-1755MHz	RTF-2000A
iPA-1900A	PCS1900	1930-1937MHz	1965-1990MHz	1855-1880MHz	RTF-2000A



iPA rugged hoist position



iPA shown with iAK-0060A ruggedized transport case with full PIM testing accessories.

*Range to Fault is an optional accessory available for iPA test instruments which enables users to measure distance to return loss faults as well as distance to PIM faults. The RTF module is sold separately.

Dual Battery charger for standalone charging sold separately.

WARNING: Use of the portable PIM analyzer in a radiating mode, for example when connected to an antenna not enclosed in an anechoic environment, may be a violation of licensing regulations. Users should have permission in advance, from any licensed operators that might be affected by these tests. Furthermore, radiating high RF power can pose a personnel risk.

Specifications subject to change.